
Uniform Ballot and Voting System Procedures

Security,
Testing, and
Troubleshooting

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Ballot Process and Security

From the time the ballots, voting equipment and memory cards are received, they should be sealed with numbered security seals and stored in a locked storage location that is not generally accessible. A Chain-of-Custody should be used to record all the times the voting equipment and supplies are accessed and reasons. A log should be maintained of all persons having access to that storage location and show the names dates times and purposes for all persons having access to that storage location.

Pre-Election Testing and Sealing Election Definition Media in Voting Equipment

At the conclusion of the pre-election testing of machines, the memory card(s) should be sealed in each machine and secured with a numbered security seal. The security seal number should be recorded on the Chain-of-Custody. Once the Chain-of-Custody's is complete, a copy will need to be transported to the polling place for the poll judges to verify the integrity of the machine.

Voting ballots, voting machines, and supplies should have a label identifying the polling place to which they are assigned. The bag or container which contains the Chain-of-Custody should be secured with a numbered security seal and recorded on the Chain-of-Custody contained inside to be verified at the polling place.

County Election Administrators are able to choose the method of delivery for ballots, voting machines, and supplies to the polls. They may either (1) deliver items the morning of the election from a central location or (2) deliver the items prior to election day and have the items kept in a secure location at the polling place. These two procedures as detailed as follows:

Delivery of the Ballots and Voting Equipment on Election Day Morning

If the tabulators and ballots will be delivered to the designated polling place on election day morning, the following procedure shall apply:

At a time predetermined by the election administrator, the chief polling place judge, election officials, or a police officer should pick up the sealed ballots, voting equipment, and election materials. A copy of the Chain-of-Custody with the appropriate section completed must be sealed in the polling place materials. Upon arrival at the polling place, the chief polling place judge, in the presence of at least one election official, shall receipt the materials received and verify the security seals are intact and match the seal numbers recorded on the Chain-of-Custody.

1. Administer the oath to the election officials from each polling place when they arrive at the county election office on election morning to pick up the ballots and voting equipment, if they have not previously been sworn in.
2. The election officials transporting the materials to the polling place shall:

- Check the supplies provided by the election administrator.
 - Examine ballot, voting equipment and required material's security seals for evidence or tampering or removal and verify the seal numbers match those recorded on the Chain-of-Custody. Report voided or missing security seals to the election administrator.
3. Without opening any ballot package ensure that the ballots are the correct ones for the polling place.
 4. Ensure that a copy of the Certificate of Number of Ballots and Chain-of-Custody are provided as part of the materials to be transported to the polling place.
 5. Transport the assigned ballots, voting equipment, and election materials to the polling place.
 6. Upon arrival at the polling place, the deliver the ballots, voting equipment, and materials to the Chief Polling Place Judge.
 7. In teams of two, polling place election officials shall examine ballot, voting equipment and required material's security seals for evidence or tampering or removal and verify the seal numbers match the seal numbers recorded on the Chain-of-Custody. Report voided or missing security seals to the election administrator.
 8. Election officials shall setup the polling place (ballots, voting equipment, etc.) as directed and according to procedures in the Election Judge Handbook and Uniform Voting System Procedures.
 9. Open the poll and conduct voting according to county training and Election Judge Handbook procedures.

Delivery of the Voting Equipment Prior to Election Day Morning

If the county election administrator determines that voting equipment or materials should be delivered on a day prior to election day morning, the following procedure shall apply:

At a time designated by the county election administrator, one of the following: two election officials, a police officer or applicable security procedures shall be used to deliver the ballots, voting equipment and election materials to their polling place. The election officials can also employee individuals who are not sworn to assist in the delivery of the ballots, voting equipment and related materials to the polls as long as these individuals are directly supervised by the election officials.

1. Administer the oath to the election officials from each polling place when they arrive at the county election office on election morning to pick up the ballots and voting equipment, if they have not previously been sworn in.
2. The election officials transporting the materials to the polling place shall:
 - Check the supplies provided by the election administrator.
 - Examine ballot, voting equipment and required material's security seals for evidence or tampering or removal and verify the seal numbers match those recorded on the Chain-of-Custody. Report voided or missing security seals to the election administrator.
3. Without opening any ballot package ensure that the ballots are the correct ones for the polling place.
4. Ensure that a copy of the Certificate of Number of Ballots and Chain-of-Custody are provided as part of the materials to be transported to the polling place.

5. Transport the ballots, voting equipment, and election materials to the designated temporary secure location for the polling place. In no event shall the tabulator or ballot be stored in a location other than the temporary secure location established by the Election Administrator.
6. Upon arrival at the polling place, in teams of two, polling place election officials shall examine ballot, voting equipment and required material's security seals for evidence or tampering or removal and verify the seal numbers match the seal numbers recorded on the Chain-of-Custody. Report voided or missing security seals to the election administrator.
7. Election officials shall setup the polling place (ballots, voting equipment, etc.) as directed and according to procedures in the Election Judge Handbook and Uniform Voting System Procedures.
8. Open the poll and conduct voting according to county training and Election Judge Handbook procedures.

Important Reminder

Polling places must open at 7 a.m. unless otherwise directed by the county election administrator. Priority should be given to ensuring that the correct materials have been received, the security seals are intact and that the seal numbers match those recorded on the Chain-of-Custody, sufficient ballots are available to be distributed at 7 a.m., and setting up tabulation and accessibility equipment by 7 a.m. If the set up of the tabulator is delayed, ballot should be distributed, voted and stored in the Auxiliary Bin on the front of the tabulator ballot box. When the tabulator is put into service, ballots should be removed from the Auxiliary Bin and scanned by two election officials. Election officials scanning Auxiliary Bin ballots shall preserve as much ballot secrecy as possible.

Early Pick-up of Ballots Prior to the Close of Polls on Election Day

If directed by the county election administrator, arrangements may be made to pick-up or return ballots to the county election office or designated ballot tabulation location. When applicable, follow county instructions regarding separating ballots for post election audit purposes.

1. Election officials shall seal the ballot box or place the designated ballots in the designated container with numbered security seals and record the seal numbers on the Chain-of-Custody.
 - Ensure that all ballots issued and marked in the pollbook prior to the early pick-up are sealed and returned with the ballots.
 - As ballots are removed from tabulators, ensure that ballots and machine reports are separated and marked according to your county's post election audit procedures (*for example: color coded, numbers, precinct name, etc.*).
 - When printing early pick-up tabulator reports, be sure to not clear the totals, unless instructed to do so by your county election administrator.
2. Transport the ballot box or designated ballot container is received at the county election office or designated ballot tabulation location.
3. Once the ballot box or container is received at the county election office or designated ballot tabulation location, verifying the security seal numbers match the Chain-of-Custody and are not missing or appear to be tampered with.

Return of Voted Ballots and Voting Equipment from Polls

1. Check the Auxiliary Bin for ballots and scan ballots deposited in the Auxiliary Bin unless directed otherwise by the county election administrator.
2. Print tabulator reports according to county and Uniform Voting System Procedures.
3. Shut down the tabulator.
4. *County Procedure*: Counties using precinct tabulators may choose to either:
 - Returned the tabulator to the county with the media card sealed in the tabulator; or
 - Remove the media card and return the media card with the tabulator's ballots and report and have the tabulator returned to the county election office at a different time.
 - If the tabulator's media card is returned separate from the tabulator; ensure that the tabulator's media card slot is re-sealed.
 - NOTE: The Uniform Voting System Procedures do not recommend removing the AutoMARK Access Terminal memory card. The AutoMARK media card should remain sealed in the unit during transportation and removed at the county election office before storage.
5. As ballots are removed from tabulators, ensure that ballots and machine reports are separated and marked according to your county's post election audit procedures (*for example: color coded, numbers, precinct name, etc.*).
 - When printing early pick-up tabulator reports, be sure to not clear the totals, unless instructed to do so by your county election administrator.
6. Remove ballots from the tabulator ballot box(s) and seal in a transportation ballot box or container, seal using numbered security seals and record the seal numbers on the Chain-of-Custody.
 - Place Write-in ballots from the Write-in Bin in an envelope marked "Write-in Bin". Place the "Write-in Bin" ballots in the ballot box or container with the regular ballots.
7. If absentee ballots are dropped off at the polling place, it must have been issued from that county.
 - Absentee ballots dropped off at the polling place shall be sealed separately according to the procedures described in the Election Judge Handbook and transported in with the sealed ballots.
8. Seal all Spoiled ballots in an envelope marked "Spoiled ballots." The envelopes containing (1) the spoiled ballots, (2) the empty absentee ballot envelopes and rejected absentee ballots, and (3) the challenged ballots, need not be placed in the ballot box or container, but must be securely returned to the county.
9. Depending on the county method for returning the tabulator and voting equipment; either:
 - Place the tabulator in the transportation case with memory card intact and sealed. The seal numbers should be recorded on the Chain-of-Custody; or
 - Prepare the tabulator for storage at the designated location. Ensure that the tabulator is sealed and that the security seal numbers are recorded on the Chain-of-Custody.
10. Ensure all ballot and voting equipment security seal numbers are recorded on the Chain-of-Custody and that the Chain-of-Custody is completed, and is returned with the ballots to the county election office or ballot tabulation location.
11. Upon arrival at the county election or the designated central ballot tabulation location, the receiving election officials must ensure that the seals on the ballots, voting equipment (*when applicable*), and elections materials are intact and match the numbers recorded on the Chain-of-Custody. Any discrepancy should be noted and explained in writing.

Storage of Ballots and Voting Equipment

1. Collect and label all ballots for storage according to county and post election audit guidelines (*for example: color coded, numbers, precinct name, etc.*).
 2. Seal the labeled ballot containers and record the security seal numbers on a log describing the contents of the container (*i.e. which ballots, which tabulator counted the ballots, etc.*).
 3. Collect, label, and seal all of the related election materials (i.e. logs, sets of test ballots, etc.). Record these security seal numbers on a log describing the materials.
 4. Store the ballots and election related materials in a secure location not generally accessible. A log should be maintained of all persons having access to that storage location. The log should show the names dates times and purposes for all persons having access to that storage location.
 5. Store the storage location access log, ballot and election material logs in a secure area not generally accessible.
 6. Collect and prepare all voting equipment for storage according to county and Uniform Voting System Procedures. These procedures include removing election definition media, maintenance review, and preparation for long-term storage.
 7. The secure ballot, election materials, and voting equipment storage location shall have the following characteristics:
 - The location shall remain locked at all times
 - Access to such location shall be exclusively controlled by the county election office
 - Access shall only be granted to such location for the purpose of machine programming, maintenance, testing or set-up
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Voting Equipment

Montana currently utilizes two types of voting equipment: Voter Assist Terminals and Optical Scan Tabulation equipment.

Accessibility Equipment

ES&S AutoMARK (Use Uniform Voting System Procedures Checklists for detailed procedures)

- The ES&S AutoMARK™ voter assist terminal is a ballot-marking system designed to provide privacy and accessibility to voters who are blind, vision-impaired, or have a disability or condition that would make it difficult or impossible to mark a ballot the usual way. The AutoMARK also provides language assistance to voters who are more comfortable speaking a different language or who need to have the ballot ready to them.
- Although the AutoMARK is designed to be used by individuals with disabilities, anyone may use the AutoMARK. The AutoMARK must be setup and available for use.
- Setup and Security Seals



Polling Place Set Up

1. Ensure you have the correct AutoMARK for the polling location.
2. Open the transportation case using the flaps on the side and team-lift the AutoMARK onto a wheelchair accessible table.
3. Ensure the Security Seals have not been tampered with and match the Chain-of-Custody.
4. Open the AutoMARK lid by sliding the latches to the outward position and lifting the lid up and back until it comes to rest on top of the AutoMARK.
5. Raise the touch screen monitor vertical and close the lid.
6. Position the AutoMARK so the screen is private and not visible to others.
7. Open the ballot feed tray by lifting up then pulling out and down until the tray is horizontal.
8. If available, install the privacy shield on the AutoMARK.
9. Plug the AutoMARK into a wall outlet. Ensure the cord is not damaged.
10. Insert the brass key into the Mode Switch and turn to the 'ON' position.
11. Remove the key and store in a secure area with the chief judge.
12. The screen will remain blank for about 60 seconds while starting up.
13. The 'ON' light color will be green if the AutoMARK is running on external power. If the color is orange the AutoMARK is running on internal battery power: if the light is orange, ensure the AutoMARK is properly plugged in and the outlet is on.
14. Print a test ballot and ensure no obstacles are preventing wheelchair access to the AutoMARK.

Tabulators

ES&S Model 100 (Use Uniform Voting System Procedures Checklists for detailed procedures)

- The ES&S Model 100 is a precinct-based, voter-activated paper ballot counter and vote tabulator. The Model 100 possesses the capability to recognize and alert voters to over and undervoting errors, allowing voters to make changes to their ballots. When the polls close, the ES&S Model 100 prints out a paper tally.
- The ES&S Model 100 can be and is also used as a central ballot counter.



- ▶ Set up at the Polling Place
 1. Ensure the correct M-100 is at the polling location.
 2. Remove the M-100 from the transportation case and place on the ballot box. Ensure not to bend any pins and that the ballot feed slot flap is open.
 3. Ensure the Security Seals have not been tampered with and match the Chain-of-Custody.
 4. Use the brass mode switch key to turn on the M-100 and store key in a secure location with the chief judge.
 5. Run a 'Zero's Report' and ensure no ballots are in the ballot box.
 6. Secure the M-100 for voting.

ES&S Model 650 (150-Legacy) (Use Uniform Voting System Procedures Checklists for detailed procedures)

- The ES&S Model 650 is a high-speed central paper ballot counter and vote tabulator.
- The ES&S Model 100 is a precinct-based, voter-activated paper ballot counter and vote tabulator. The Model 100 possesses the capability to recognize and alert voters to over and undervoting errors, allowing voters to make changes to their ballots. When the polls close, the ES&S Model 100 prints out a paper tally.



- ▶ Set up
 1. Ensure the correct M-100 is at the polling location.
 2. Remove the M-100 from the transportation case and place on the ballot box. Ensure not to bend any pins and that the ballot feed slot flap is open.
 3. Ensure the Security Seals have not been tampered with and match the Chain-of-Custody.
 4. Use the brass mode switch key to turn on the M-100 and store key in a secure location with the chief judge.
 5. Run a 'Zero's Report' and ensure no ballots are in the ballot box.
 6. Secure the M-100 for voting.

Voting Equipment Inventory

Any changes to county voting equipment need to be recorded on county inventory controls and reported to the Secretary of State's office.

- ▶ Equipment (including replacement equipment) purchased in whole or in part with federal HAVA grant funds must be recorded on the county inventory, the title is vested with the county upon acquisition.
- ▶ Equipment shall be used in the program for which it was acquired as long as needed, whether or not the program continues to receive Federal funds.
- ▶ Procedures for managing equipment (including replacement equipment) purchased in whole or in part with federal HAVA grant funds must, as a minimum, meet the following requirements:
 - Maintain property records including the specific requirements listed to the left.
 - Conduct and reconcile a physical inventory of the property at least once every two years.
 - Develop a control system to ensure adequate safeguards to prevent loss, damage or theft of the property. Any loss, damage, or theft shall be investigated.
 - Proper sales procedures must be established to ensure the highest possible return.
- ▶ The State must be informed of any changes affecting federal equipment.

Description:	AutoMARK	Model 100	...
Serial Number:	#AM0206	#12345	
Source of Property	ES&S	ES&S	
Title holder	County A	County A	
Acquisition Date	1/1/2011	1/1/2011	
Cost of Property	\$5,000	\$5,000	
% of Federal ownership	100%	50%	
Location	Room 101	Room 200	
Use	Voting	Voting	
Condition	Good	Good	
Disposition Date	n/a	9/1/2011	
Disposition Price	n/a	\$4,000	
Buyer	n/a	County B	
Notes		Excess	

Security Seal Placement

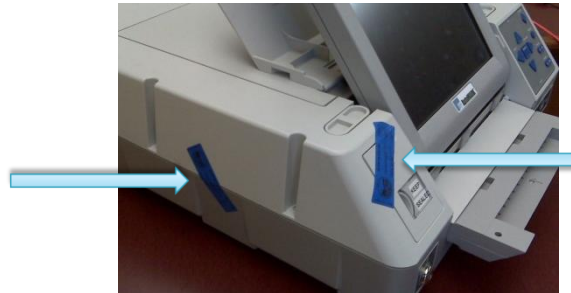
As soon as voting equipment is received, it should be acceptance tested and sealed with numbered security seals that are recorded on a chain-of-custody.

- ▶ The Secretary of State's office has developed checklists outlining security procedures for ballots, voting equipment, and voting system media.
- ▶ These checklists incorporate best practices such as tamper-evident seals, chain-of-custody procedures, and two-person security measures.
 - Your handout includes a *sample* of the Ballot Security Procedures checklist on the left page.
 - Security and Testing Procedure checklists for Ballots and all equipment are attached.

There are a number of security procedures that can be implemented to mitigate conspiracy and sabotage concerns while making voting systems significantly more secure. The following is a brief overview for some of the industry's best practices.

- ▶ Security Seals
 - Security Seals are tamper-proof, numbered seals that allow voting devices to be inspected for any evidence of tampering.

- ▶ Security Seal Placement
 - AutoMARK (2 Security Seals)
 - ▶ Election Media Door
 - ▶ Across case halves



- Model 100 (3 Security Seals)
 - Model 100 Ballot Box (3 Seals)
 - ▶ Ballot Doors (2)
 - ▶ Accessory bin (1)
 - Storage with Ballots
 - ▶ All ballot access points (4)



- Model 650 (2 Security Seals)
 - ▶ Across media drives
 - ▶ Across rear door
- Election Management Software
 - ▶ Across all computer access points, including USB ports and drives.
 - ▶ Ensure this computer is not connected to the Internet or Network.

Troubleshooting

If at any point a voting system is not working properly, notify your county office to make them aware of the situation and provide the opportunity to provide additional instruction. The Troubleshooting guides in your handout address the most commonly encountered problems and error messages associated with the ES&S AutoMARK and M-100.

- ▶ Troubleshooting guides include:
 - Contact Information
 - Message to the elector
 - Failure procedures
 - Problem and Error Messages
 - Security Procedures

These guides are also included at the back of your handout in a format that can easily be copied. If you would like an electronic copy of these Troubleshooting Guides, please contact the Secretary of State's office.

Troubleshooting the ES&S AutoMARK

Voter Accessibility Terminal (VAT)

Please keep a copy of this Troubleshooting guide with each ES&S AutoMARK
Additional references are provided in your election day supplies:
(ES&S AutoMARK Election Day Checklist and Montana Election Judge Handbook).



The system manufacturer and Secretary of State election office is available to help with any AutoMARK troubleshooting.
Please call if you have problems or questions: ES&S 1(877)377-8683 / Secretary of State Elections Office 1(406)444-7911

Message to the elector: In addition to ballot voting instructions give the elector the following guidance:

- An election judge will assist with inserting your ballot. If you believe that you have encountered a problem while using the AutoMARK voter assistance terminal please signal an election judge to assist in resolving the error and ensure that the ballot stub has been removed from your ballot.
- After marking and printing your ballot, return ballot to election judge in the secrecy sleeve provided.

If the AutoMARK fails during an election: Use additional AutoMARK if present and:

- Notify elector that the secrecy of their ballot may be compromised when removing ballot from voting system.
- Reference common troubleshooting problems below for possible problem and solution.
- Document machine number, date and time, problem and actions taken to remedy problem.
- If problem persists, notify County Election Administrator (possibly request replacement AutoMARK).

Problem or (Error Message)	Probable Causes	Possible Solution
AutoMARK 'Locks' up	<ul style="list-style-type: none"> ▪ Unknown 	<ul style="list-style-type: none"> ▪ Shut down and restart system.
Ballot Inserted and <u>Rejected</u> (Ballot Not Recognized) (Paper misfed. Please contact an election official)	<ul style="list-style-type: none"> ▪ Ballot was inserted incorrectly. ▪ Ballot stub is attached to ballot. ▪ Ballot style not stored on VAT. ▪ Ballot may be damaged. ▪ Ballot feed tray is misaligned. ▪ PV scanner is smeared or dusty. 	<ul style="list-style-type: none"> ▪ Re-insert ballot. ▪ Remove ballot stub and re-insert. ▪ Verify correct election definition is used. ▪ Replace ballot if damaged. ▪ Check ballot feed tray alignment. ▪ Clean PV scanner with canned air.
Ballot Inserted and <u>Jammed</u> (Paper misfed. Please contact an election official)	<ul style="list-style-type: none"> ▪ Ballot was inserted incorrectly. ▪ Rear AutoMARK door is ajar. ▪ Battery power is insufficient to return ballot. 	<ul style="list-style-type: none"> ▪ Remove ballot (instructions below). ▪ Remove ballot and close rear door. ▪ Ensure AutoMARK is plugged in and mode switch light is green (AC power).
AutoMARK will not turn on (Startup Failed)	<ul style="list-style-type: none"> ▪ Initial setup procedures failed. ▪ Battery low or running on battery. 	<ul style="list-style-type: none"> ▪ Turn unit off and then back on. ▪ Try another outlet (green light=AC Power)
Ballot Returned Unmarked	<ul style="list-style-type: none"> ▪ Ballot was ejected before printing. ▪ Voter may have accidentally touched the "EXIT Return Ballot" button. ▪ Ballot may have been misfed. 	<ul style="list-style-type: none"> ▪ Re-insert ballot.
Battery Low or Running on Battery	<ul style="list-style-type: none"> ▪ Battery power is low and a yellow rather than a green light appears above the Mode Switch. 	<ul style="list-style-type: none"> ▪ Check to be sure the unit is plugged in correctly. ▪ Try another outlet.
Audio is not present	<ul style="list-style-type: none"> ▪ Volume may be set too low. ▪ Headphones are not connected. ▪ Election information may be wrong. 	<ul style="list-style-type: none"> ▪ Turn volume level up. ▪ Reconnect headphones. ▪ Contact Election Administrator.
Ballot selection is not marked	<ul style="list-style-type: none"> ▪ Ink supply is low. 	<ul style="list-style-type: none"> ▪ Replace ink cartridge.
No response when key is pressed	<ul style="list-style-type: none"> ▪ Unknown. 	<ul style="list-style-type: none"> ▪ Shut down and restart system.
No response when a Sip and Puff or personal device is used.	<ul style="list-style-type: none"> ▪ Device cable is not properly attached to access port. 	<ul style="list-style-type: none"> ▪ Check all connections, then shut down and restart system if necessary.

If a regular ballot gets jammed in the AutoMARK unit, try to remove it using the following steps:

- Notify the elector that an election official must remove their ballot and that their ballot secrecy may be compromised.
- Lift the lid behind the screen. Once lifted, you can see inside the AutoMARK.
- Inside the AutoMARK at the rear of the visible tray are two tabs.
- Push in on the tabs and lift up on the tray to remove tray. Remove the ballot.
- Put the front of the tray back into the AutoMARK machine and push back until it snaps into place.
- Close the cover and turn the key to the 'Test' position, select 'Eject Ballot' and turn the key to 'On.'

Troubleshooting the ES&S Model 100 Optical Scan Tabulator



Please keep a copy of this Troubleshooting guide with each ES&S Model 100
Additional references are provided in your election day supplies:
(ES&S Model 100 Election Day Checklist and Montana Election Judge Handbook).

The system manufacturer and Secretary of State election office is available to help with any tabulator troubleshooting
Please call if you have problems or questions: ES&S 1(877)377-8683 / Secretary of State Elections Office 1(406)444-7911

Message to the elector: In addition to ballot voting instructions give the elector the following guidance:

- Once you have finished voting your ballot, please use the secrecy sleeve provided to deposit your ballot in the tabulator.
- Please wait as the tabulator scans your ballot. If accepted the number on the screen will increase by one per ballot sheet scanned.
- An error message will appear if there is a potential tabulation error with your ballot. Please read the message and either press accept to tabulate your ballot or press reject to have your ballot returned for possible changes. You may review your ballot for any errors or signal an election judge to assist you if you believe the tabulator has made an error.

If the tabulator fails during an election:

- Open and store ballots in the temporary ballot storage bin until the tabulator is repaired or replaced.
- Reference common troubleshooting problems below.
 - Additional resources provided in your election day supplies: (Model 100 Election Day Checklist and Election Judge Handbook).
- When available, deposit ballots in another tabulator (ensure tabulator will accept multiple precinct ballots).
- Document machine number, date and time, problem and actions taken to remedy problem.
- If problem persists, contact County Election Administrator (possibly request replacement Model 100).

Problem or (Error Message)	Probable Causes	Possible Solution
No votes detected on ballot	<ul style="list-style-type: none"> ▪ Voter left ballot blank. ▪ Ballot was not marked dark enough. ▪ Marks are not inside the ovals. 	<ul style="list-style-type: none"> ▪ Have the voter look at the ballot, to see if not marked dark enough or not marked inside of oval. ▪ Voter may vote replacement ballot or accept ballot as unmarked.
(No AC)	<ul style="list-style-type: none"> ▪ Ballot tabulator is running on battery and is not plugged into AC power. ▪ Wall power outlet is defective. 	<ul style="list-style-type: none"> ▪ Check power cord at both ends to ensure connection is good. ▪ Try another outlet.
(Diverter Not Found)	<ul style="list-style-type: none"> ▪ The tabulator is not fully seated. ▪ Connection not made from diverter to ballot box. 	<ul style="list-style-type: none"> ▪ Unlock Access Panel door and ensure the ballot tabulator is properly seated against the ballot box.
(No Election Card)	<ul style="list-style-type: none"> ▪ Memory Card is not properly seated. 	<ul style="list-style-type: none"> ▪ Remove security seal and ensure memory card is properly seated. ▪ Reseal with new security seal and record removal and reason.
Ballot Jam	<ul style="list-style-type: none"> ▪ Ballot Box diverter door is not open. ▪ Ballot is torn or folded and stuck in tabulator. 	<ul style="list-style-type: none"> ▪ There may be a ballot jam in the back, pull out the unit and check for ballot and open diverter door.
Multiple Ballots Detected	<ul style="list-style-type: none"> ▪ More than one ballot was put through the tabulator. 	<ul style="list-style-type: none"> ▪ Put ballots one at a time through the tabulator.
Ballot Too Long	<ul style="list-style-type: none"> ▪ Ballot stub was not removed. 	<ul style="list-style-type: none"> ▪ Remove ballot stub and insert ballot.
Printer does not print (Printer Time Out Abort Printing)	<ul style="list-style-type: none"> ▪ Out of printing paper. ▪ Paper jam. ▪ Paper release lever is in the up position. ▪ Paper is incorrectly oriented. 	<ul style="list-style-type: none"> ▪ Use Auxiliary Bin until the problem is resolved. ▪ Remove security seal, replace paper, and record security seal replacement. ▪ Ensure paper comes off from bottom of roll and feeds 'up' through printer.
Does not automatically print close of polls report	<ul style="list-style-type: none"> ▪ Media card is removed. ▪ Paper ran out. ▪ Paper release lever is in the up position. 	<ul style="list-style-type: none"> ▪ Replace media card. ▪ Replace paper supply. ▪ Correctly feed paper in printer. ▪ Depress paper release lever. ▪ Manually print report.

Security procedures:

- Ensure all voting system access points are sealed while polls are open.
- Ensure all ballot box access points are sealed while polls are open.
- Before removing/breaking a security seal, ensure more than one judge is present (preferably one from each party).
- Record the number of the security seal removed and replacement seal as well as reason for removing seal.

Voting Equipment Chain-of-Custody

As soon as voting equipment is received by the county, the equipment should be sealed with numbered security seals and these security seal numbers recorded on a chain-of-custody maintained by the county. A chain-of-custody should maintain information as to who accessed the equipment, when the equipment was accessed and a specific reason why.

- ▶ The Chain-of-Custody procedures along with security seals and inventory controls ensure that voting units are properly and securely controlled and accounted for at all times throughout the election administration process.
- ▶ Your handout includes a *sample* Chain-of-Custody and Security Seal Log to the left. This log is for tracking ballots, voting equipment media, and voting systems to the poll and back.

The four procedures are:

- ▶ Materials prepared by the county
- ▶ Materials received at the poll
- ▶ Materials prepared after the poll closes
- ▶ Materials received by the county

A second sample Security Seal Log is included for establishing a chain-of-custody for storage and maintenance purposes.

Images of these security seal logs are on the following two pages. There are also copies of these logs in the back of your binder. The copies in the back of the binder are able to be copied and reproduced. Contact the Secretary of State's office for electronic copies.



(Sample) Montana Voting System Chain of Custody & Security Seal Log

This form is for tracking ballots, voting/tabulating equipment and media and must accompany these to the polls and back.

Part 1: (to be completed by county)

Election: _____ Polling Place: _____ Date: _____

Materials prepared at county to be delivered to the polling place

AutoMARK Serial #	Flashcard Door Seal #	Side of Unit Seal #	Other:	Other:		
M100 Serial #	Key/Printer Door Seal #	PCMCIA Access Seal #	Access Panel Seal #	Ballot Box Seal #s (Doors)		

Verified by: _____

Election Administrator or designee (Date/Time) _____

Witness _____

Part 2: (to be completed by chief election judge or polling place manager before the polls open)

Materials received at poll (record before polls open)

AutoMARK Serial #	Flashcard Door Seal #	Side of Unit Seal #	Other:	Other:		
M100 Serial #	Key/Printer Door Seal #	PCMCIA Access Seal #	Access Panel Seal #	Ballot Box Seal #s (Doors)		

Before Polls Open – Seals were verified by: _____

Polling Place Manager or Chief Election Judge (Date/Time) _____

Election Judge _____

Part 3: (to be completed by chief election judge or polling place manager after the polls open)

After the polls close

AutoMARK Serial #	Flashcard Door Seal #	Side of Unit Seal #	Other:	Other:		
M100 Serial #	Key/Printer Door Seal #	PCMCIA Access Seal #	Access Panel Seal #	Ballot Box Seal #s (Doors)		

After Polls Closed – Seals were verified by: _____

Polling Place Manager or Chief Election Judge (Date/Time) _____

Election Judge _____

Part 4: (to be completed by county receiving board, election administrator or designee upon return to county)

Received by the county

AutoMARK Serial #	Flashcard Door Seal #	Side of Unit Seal #	Other:	Other:		
M100 Serial #	Key/Printer Door Seal #	PCMCIA Access Seal #	Access Panel Seal #	Ballot Box Seal #s (Doors)		

Verified by: _____

Election Administrator or designee (Date/Time) _____

Witness _____

Sample Security Seal Number Log – Election: _____ Polling Place: _____

Removed Seal	Machine Type Machine Number	Machine Seal Location	Seal Number Removed/Placed	Reason Removed	Date	Initials
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 ----- # Civic Center 2	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	1000 ----- 1007	Inserted media card.	12/31	EA
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 -----	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	-----			
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 -----	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	-----			
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 -----	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	-----			
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 -----	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	-----			
(place removed seal here)	<input type="checkbox"/> AutoMARK <input type="checkbox"/> M100 -----	<input type="checkbox"/> Media Card <input type="checkbox"/> Access Panel <input type="checkbox"/> Other	-----			

*This form must be retained for four years (Three years preceding the last calendar year)

Testing and Checklists

The Secretary of State's office has developed checklists and uniform procedures outlining security procedures for ballots, voting equipment, and voting system media.

- ▶ These checklists incorporate best practices such as tamper-evident seals, Chain-of-Custody procedures, and two-person security measures.
 - Details about specific security and testing procedures for ballots, voting equipment, and software are on the following pages. Shortened checklists for the uniform procedures are on the pages following the detailed descriptions.
- ▶ Although these checklists and procedures were developed as a one-size-fits-all, counties are can develop specific procedures for their circumstances.
- ▶ The following checklists include:
 - Ballot Security
 - Voting Equipment
 - Acceptance Testing
 - County Pre-Testing
 - Public Certification Testing
 - Election Day Testing
 - Storage Procedures
 - Maintenance Procedures

Voting System Testing Overview

A voting system is defined as a *specific* combination of mechanical, electromechanical, and electronic equipment used to define ballots, cast and count votes, report or display election results, connect the voting system to the voter registration system, and maintain and produce any audit trail information.

Any change or modification to a certified voting system may void the system's certification and require that the voting system be resubmitted for testing and certification. For a list of change or modifications to Montana's voting certified voting systems, please contact the Secretary of State.

Testing Voting Systems

The Election Assistance Commission (EAC) has primary responsibility for assuring that voting system designs meet the applicable EAC Guidelines for voting equipment in the United States. State officials have responsibility for testing voting systems to ensure that they will support the specific requirements of each State.

As part of the decision to issue State certification, the State takes into consideration nontechnical issues such as the ownership of the manufacturer, the qualifications of the manufacturer's management team, or the financial stability of the voting system manufacturer. A list of State-certified systems can be obtained from the Secretary of State.

Local officials are responsible for conducting acceptance testing to ensure that the equipment delivered is identical to the equipment certified on the Federal and State levels and that it meets the contractual requirements of the purchase. Local officials are also tasked with conducting performance (logic and accuracy) testing to ensure that the voting system is performing properly.

- ▶ There are three main voting system tests. These are all outlined in your handout with applicable dates on the annual Election Calendar.
 - The calendar also includes dates for circulating Voting System Exhibition and Diagrams in countywide publications.
- ▶ The three tests are:
 - **County** – As soon as all ballots and voting system media arrive, the county should test each ballot styles and contests with all voting units as soon as possible.
 - **Public** – Not more than 30 Days before Election Day, 10% of each type of voting system must be publically tested. Practice this test with a county-made test deck.
 - **Election Day** – On Election Day 5% of each type of voting system must be tested.

Test	Date	Units	Notes
County Pretest	As soon as ballots and voting system election definition media are received	All voting units and All ballot contests and candidates	Use a County-made test deck
Public Test	Not more than 30 days before an election in which the system will be used	10% of each type of voting system that will be used	Include backup equipment
Election Day	On Election Day	5% of each type of voting system that will be used	Include backup equipment

Local election officials are responsible for conducting voting system testing to ensure that the equipment is identical to the equipment certified and that the system is performing properly. Testing must be conducted either by or under the strict control of the county election official. Under no circumstance should acceptance tests be conducted by a vendor.

It is recommended that your office maintain a complete record of every test that is conducted. *Example: Use the checklist that has a location for recording the date of the test, the type of device being tested (i.e. assist terminal, ballot scanner, etc.), the serial number of the device and the outcome of the test.* The procedures for conducting voting system testing may seem complicated and burdensome at first. However, you will find it easier and become more efficient at it the more you conduct these tests and familiarize yourself with the process.

There are three distinct tests that need to be conducted prior to testing and use: *a test for physical damage, a diagnostic test, and a test for functional correctness.* These tests should be followed by proper storage and security procedures.

Physical Analysis: This test is to assure that the device is not physically damaged. This test includes:
 Inspection of the outer shell or case that contains the device.
 Inspection of the latches and hinges on the outer shell or case.
 Inspection of all doors and locks.

Diagnostic Analysis: This test is to assure that all of the mechanical and electronic components of the device are operating correctly. This test includes:
 Tests of all input/output devices, such as card readers and printers.

Tests of ballot feed paths.

Tests of touch-screen clarity and calibration.

Tests of time, date selection.

Tests of connections for external devices, such as earphones and personal accessibility devices.

Functional Analysis: This test is to assure that the correct versions of the software/firmware are installed in the device and that the device will perform correctly during an election. This test consists of loading an election onto the device, casting or marking a known test set of ballots, and then counting the votes and comparing the results with the known vote totals.

Storage and Security: This section outlines the standards and special requirements for storage and security specific to the equipment or software.

Acceptance Testing

Local election officials are responsible for conducting acceptance testing to ensure that the equipment delivered is identical to the equipment certified on the Federal and State levels and that it meets the contractual requirements of the purchase. A description of the devices that are currently certified for use in Montana is at the end of this section and available from the Secretary of State's Office.

An acceptance test should also be performed any time a device leaves your control and is returned. Example: If a device is sent out for repair and returned or if a device is loaned to a group or organization for demonstration purposes and returned, you should complete an acceptance test upon its return to your possession. Acceptance tests are conducted on individual devices such as touch screen voting stations, ballot scanners, etc. These devices must be a component of an overall certified voting system.

Acceptance Test – Voter Assist Terminal

Materials Required: In addition to the following, you must know the correct version of operating system and/or firmware in your terminal:

- A flash card with the ballot election definition for your acceptance test.
- Test Ballots.
- Terminal access keys for gaining manager/administrator privilege on the terminal.

Physical Analysis: Conduct the following with the unit turned OFF:

1. Examine the unit for cracks, dents, and structural deficiencies.
(*Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.*)
2. Verify that there is an ink cartridge in the printer.

Diagnostic Analysis: Conduct the following with the unit turned ON. Some of these tests may require manager/administrator privilege.

3. Turn the voter assist terminal on, and as it boots up verify that the correct versions of the operating system and firmware are installed.
4. Verify that the date and time are correct.
5. Verify the screen condition, clarity, and calibration (calibrate if necessary).
6. Print a test ballot to verify that the printer is operating correctly.
7. Unplug the unit and verify that it will operate on battery power alone.
8. Verify that the battery charger will charge the battery.
9. Test access ports and flash card slot (*i.e. headphone jack, personal device ports, etc.*).

Functional Analysis: Install the election definition flash card, turn the unit ON, then:

10. Inset test ballots in different orientations (face up, face up backwards, face down, etc.)
11. Manually enter one vote for each candidate or issue and verify that each candidate and issue has received exactly one vote (test for blank ballots, over, under, and write-in votes).
12. Test all user functions (touch screen buttons, keypad keys, headphone commands, etc.).
13. Print voted test ballots to verify that the printer is accurately marking selections and operating correctly.

Security and Storage: After acceptance testing:

14. Apply security seals and record on chain of custody form according to security guidelines.
15. Record unit on county property record according to Common Rule information requirements. (Notify the Secretary of State about any changes to the county equipment inventory).

16. Store in a secure location with access recorded and limited to authorized personnel only.

Acceptance Test – Optical Scan Ballot Scanner

Materials Required: In addition to the following, you must know the correct version of the operating system and/or firmware that was certified for your ballot scanner:

- A memory card with the election setup for your acceptance test.
- Password, manager key for gaining manager/administrator privilege on the voting station.
- A test set of pre-marked optical scan ballots.

Physical Analysis: Conduct the following with the ballot scanner turned OFF:

1. Examine the unit for cracks, dents, and structural deficiencies.
(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)
2. Verify that there is paper in the printer.

Diagnostic Analysis: Conduct the following with the ballot scanner turned ON. Some of these tests may require manager/administrator privilege.

3. Turn the ballot scanner on, and as it boots up verify that the correct versions of the operating system and firmware are installed.
4. Verify that the date and time are correct.
5. Verify the screen condition, clarity, and calibration (calibrate if necessary).
6. Print a test output to verify that the printer is operating correctly.
7. Unplug the ballot scanner and verify that it will operate on battery power alone.
8. Verify that the battery charger will charge the battery.
9. Test all I/O ports and card slots (*i.e. serial ports, PCMCIA card slots, etc.*).

Functional Analysis: Install the election media/setup then:

10. Zero totals.
11. Print zero tape.
12. Use the pre-marked test set of ballots to accumulate a significant number of ballots (at least 25) on the ballot scanner.
13. Close the election on the ballot scanner.
14. Print the results.
15. Verify the vote counts are correct.
16. Zero totals.

Security and Storage: After acceptance testing:

17. Apply security seals and record on chain of custody form according to security guidelines.
18. Record unit on county property record according to Common Rule information requirements. (Notify the Secretary of State about any changes to the county equipment inventory).
19. Store in a secure location with access recorded and limited to authorized personnel only.

Acceptance Test – Election Management System

This Acceptance Test is designed to verify that the Election Management System (EMS) is correctly configured and operating properly. Acceptance tests should always be conducted on a new EMS prior to its use in an election. Also, acceptance tests should be conducted on an EMS that was returned after having left your control. *Example: If the EMS computer is sent out for repair or if a new version of the operating system or EMS is installed, an acceptance test should be conducted as soon as possible.*

Materials Required: In addition to the following, you must know the correct version of your operating system and your EMS. The following components of a voting system are required to complete the acceptance testing procedures:

- One Computer with EMS installed.
- If Optical Scan (OS) Ballot Scanners are used:
 - One of each type of OS Ballot Scanner that will be used (i.e. M100, M650),
 - One Blank OS Memory card/device, and
 - One set of pre-marked OS test ballots with known vote totals.
- All cables and devices necessary to operate the EMS are connected to the EMS computer.
- A memory card or storage device with the election setup for your acceptance test.
- One blank memory cards or storage device used by your system to store tabulation totals.

Important Prerequisites: The EMS computer system, consisting of the items above should have been setup and tested before beginning this test. The corresponding OS Ballot Scanners should have previously completed acceptance testing. If not, run the OS Ballot Scanner Acceptance Test on these units before beginning this test.

Verify EMS Software Version: Turn on the EMS computer. After the computer has started up, verify that the correct versions of the computer's operating system and the EMS software are installed. Contact the Secretary of State's office for a list of EMS software and versions certified for use in Montana.

Verify EMS Hardware: Verify that all hardware components of the EMS computer are turned on and functioning properly. *This includes checks of the printer(s), disk drives, etc.* Contact the Secretary of State's office for a list of EMS software and versions certified for use in Montana.

EMS Functionality:

1. Verify that your voting system is not connected to any network.
2. Load the EMS acceptance test database on the EMS computer.
3. Verify that the OS Ballot Scanner will support election definition media prepared by EMS.
(If your county uses EMS to create election definition media, otherwise skip to #3) Prepare the election definition media using EMS. Load the load the election definition into the OS ballot scanner. Verify that the election definition prepared by EMS loaded and is the correct version.
4. Load the election definition into the OS ballot scanner. Open the election on the OS ballot scanner. Use the pre-marked set of optical scan ballots to cast votes on the OS ballot scanner. Close the election on the OS ballot scanner. Print the vote totals on the OS ballot scanner. Use the standard method of transferring votes from the OS ballot scanner to the EMS system to load the votes from the OS ballot scanner to the EMS system. *(Step #3 must be conducted for election definition media prepared by the vendor and your EMS program-if applicable.)*
5. Verify Printed Outputs:
6. Close the election on the EMS.
7. Print all election reports from the EMS.
8. Compare results from the EMS with results from the OS ballot scanner.

Security and Storage: After acceptance testing:

9. On the EMS computer apply security seals to all unused connections including universal serial bus (USB), parallel, and other ports.
10. Record EMS computer and software licenses on county property record according to Common Rule requirements. (Notify the Secretary of State about any changes to the county equipment inventory).

11. Store in a secure location with access recorded and limited to authorized personnel only.
12. Verify that your voting system is not connected to any network.

County Pre-Election Test

The County Pre-Election Test should be performed as soon as ballots and election media are received to allow for any corrections. Ensure that the security seals removed and replaced for pre-election testing are document on the chain-of-custody. Pre-Election testing should be conducted on every device, including backup units, and election management software.

The County Pre-Election Test is a full test run on every unit to ensure everything is performing properly.

County Pre-Election Test – Voter Assist Terminal

Materials Required: In addition to the following, you must know the correct version of operating system and/or firmware in your terminal:

- A flash card with the ballot election definition.
- County made test ballots.
- Terminal access keys for gaining manager/administrator privilege on the terminal.

Physical Analysis: Conduct the following with the unit turned OFF:

1. Examine the unit for cracks, dents, and structural deficiencies.
(*Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.*)
2. Verify that there is an ink cartridge in the printer.

Diagnostic Analysis: Use the following steps to insert the flashcard and turn the unit ON.

3. Use the silver barrel key to access the flashcard drive and insert the flashcard. (Ensure that the flashcard is inserted with the tail pointing towards the touch screen. Do not force the flash card into the drive as this can damage to the unit.)
4. Turn the voter assist terminal on, and as it boots up verify that the correct version of the firmware installed.
5. Verify that the date and time are correct.
6. Verify the screen condition, clarity, and calibration (calibrate if necessary).
7. Print a test ballot to verify that the printer is operating correctly.
8. Unplug the unit and verify that it will operate on battery power alone.
9. Verify that the battery charger will charge the battery.
10. Test access ports and flash card slot (*i.e. headphone jack, personal device ports, etc.*).

Functional Analysis: Install the election definition flash card, turn the unit ON, then:

11. Inset test ballots in different orientations (face up, face up backwards, face down, etc.)
12. Manually enter one vote for each candidate or issue and verify that each candidate and issue has received exactly one vote (test for blank ballots, over, under, and write-in votes).
13. Test all user functions (touch screen buttons, keypad keys, headphone commands, etc.).
14. Print voted test ballots to verify that the printer is accurately marking selections and operating correctly.

Security and Storage: After pre-election testing:

15. Apply security seals and record on chain of custody form according to security guidelines.
16. Record unit on county property record according to Common Rule information requirements. (Notify the Secretary of State about any changes to the county equipment inventory).
17. Store in a secure location with access recorded and limited to authorized personnel only.

County Pre-Election Test – Optical Scan Ballot Scanner

Materials Required: In addition to the following, you must know the correct version of the operating system and/or firmware that was certified for your ballot scanner:

- A memory card or other device with the election setup for your acceptance test.
- Password, manager card, or other device for gaining manager/administrator privilege on the voting station.
- A test set of pre-marked optical scan ballots.

Physical Analysis: Conduct the following with the ballot scanner turned OFF:

1. Examine the case and/or cover for cracks or dents.
2. Inspect latches, hinges, and wheels, if present.
3. Examine the legs and/or stand, if present.
4. Inspect the power cord and plug.
5. Verify that there is paper in the printer.

Diagnostic Analysis: Conduct the following with the ballot scanner turned ON. Some of these tests may require manager/administrator privilege.

6. Turn the ballot scanner on, and as it boots up verify that the correct versions of the operating system and firmware are installed.
7. Verify that the date and time are correct.
8. Print a test output to verify that the printer is operating correctly.
9. Unplug the ballot scanner and verify that it will operate on battery power alone.
10. Verify that the battery charger will charge the battery.
11. Test all I/O ports and card slots (*i.e. serial ports, voter card slots, etc.*).

Functional Analysis: Conduct the following with the ballot scanner turned ON ELECTION (TEST) MODE.

Install the election setup for the test ballot, then:

12. Zero totals.
13. Print zero tape.
14. Use the pre-marked test set of ballots to accumulate a significant number of ballots (at least 25) on the ballot scanner.
15. Close the election on the ballot scanner.
16. Print the results.
17. Verify the vote counts are correct.
18. Zero totals.

Security and Storage: After pre-election testing:

19. Apply security seals and record on chain of custody form according to security guidelines.
20. Record unit on county property record according to Common Rule information requirements. (Notify the Secretary of State about any changes to the county equipment inventory).
21. Store in a secure location with access recorded and limited to authorized personnel only.

County Pre-Election Test – Election Management System

Materials Required: In addition to the following, you must know the correct version of your operating system and your EMS. The following components of a voting system are required to complete the pre-election testing procedures:

- One Computer with EMS installed.
- If Optical Scan (OS) Ballot Scanners are used:

- One OS Ballot Scanner,
- One Blank OS Memory card/device, and
- One set of pre-marked OS test ballots with known vote totals.
- All communications cables and devices necessary to connect the TS voting station and the OS ballot scanner to the EMS computer.
- One blank storage device of the type used by your system to store the election setup.
- One storage device containing your acceptance test election setup.

Important Prerequisites: The EMS computer system, consisting of items above should have been setup and Acceptance Tested before beginning this test. The OS Ballot Scanner should have previously completed acceptance testing. If not, run the OS Ballot Scanner Acceptance Test on these units before beginning the pre-election test.

Verify EMS Software Version: Turn on the EMS computer. After the computer has started up, verify that the correct versions of the computer's operating system and the EMS software are installed. Contact the Secretary of State's office for a list of EMS software and versions certified for use in Montana.

Verify EMS Hardware: Verify that all hardware components of the EMS computer are turned on and functioning properly. *This includes checks of the printer(s), disk drives, etc.* Contact the Secretary of State's office for a list of EMS software and versions certified for use in Montana.

EMS Functionality:

1. Verify that your voting system is not connected to any network.
2. Load the EMS pre-election test database on the EMS computer.
3. Verify that the OS Ballot Scanner will support election definition media prepared by EMS.
(If your county uses EMS to create election definition media, otherwise skip to #3) Prepare the election definition media using EMS. Load the load the election definition into the OS ballot scanner. Verify that the election definition prepared by EMS loaded and is the correct version.
4. Load the election definition into the OS ballot scanner. Open the election on the OS ballot scanner. Use the pre-marked set of optical scan ballots to cast votes on the OS ballot scanner. Close the election on the OS ballot scanner. Print the vote totals on the OS ballot scanner. Use the standard method of transferring votes from the OS ballot scanner to the EMS system to load the votes from the OS ballot scanner to the EMS system. *(Step #3 must be conducted for election definition media prepared by the vendor and your EMS program-if applicable.)*
5. Verify Printed Outputs:
6. Close the election on the EMS.
7. Print all election reports from the EMS.
8. Compare results from the EMS with results from the OS ballot scanner.

Security and Storage: After pre-election testing:

9. On the EMS computer apply security seals to all unused connections including universal serial bus (USB), parallel, and other ports.
10. Ensure EMS computer hardware and software (licenses) is recorded as county property according to Common Rule requirements. (Notify the Secretary of State about any changes to the county equipment inventory).
11. Store in a secure location with access recorded and limited to authorized personnel only.
12. Verify that your voting system is not connected to any network.

Public Certification Testing

Performance testing and certification of voting systems prior to an election in which a voting system will be used, the election administrator shall publicly test and certify that the system is performing properly.

No more than 30 days before an election, counties must test at least 10 percent, with a minimum of one, of each type of voting machine that will be used, including backup units. *For example: A county with 8 units must test at least one unit. A county with 21 units must test at least 3 units.*

Certification of Testing forms are included at the back of this handout.

Public Certification Test - Voter Assist Terminal

Materials Required: In addition to the following, you must know the correct firmware version for your terminal:

- A flash card with the ballot election definition.
- County made test ballots.
- Terminal access keys for gaining manager/administrator privilege on the terminal.

Physical Analysis:

1. Randomly select 10%, a minimum of one, Voter Assist Terminals that will be used, include backup units. *A county with 8 units must test at least one unit. A county with 21 units must test at least 3 units, etc.*
2. Examine the unit for cracks, dents, and structural deficiencies. *(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)*
3. Verify security seal numbers match the numbers recorded on the seal log and visually inspect the machine for signs of unauthorized access.
4. Ensure that there is an ink cartridge in the printer and that the print head is clean. *Clean dirty print heads by dabbing the print head on a cloth dampened with Windex.*

Diagnostic Analysis:

5. Verify that the election definition media is installed, if not install, seal, and record seal number on seal log.
6. Turn the voter assist terminal on, and as it boots up verify that the correct firmware version is installed. *While the unit is booting up, the firmware version is displayed at the top of the screen (AutoMARK #.#).* Firmware Version: _____
7. When screen displays "Insert Your Ballot," turn the mode switch key to the "TEST" position.
8. Print a test ballot and verify that the printer is operating correctly and clearly.
9. Verify the date and time is correct. Date: ____/____/____ Time: ____:____
The date and time are located at the bottom of the test ballot and the top right corner of the "TEST" screen.
10. Verify the screen condition, clarity, and calibration (calibrate if necessary).

Functional Analysis:

11. Turn the mode switch key to the "ON" position.
12. Remove ballot stub and insert a ballot into the terminal.
13. Test all ballot marking options while making ballot selections (touch screen, keypad, etc.).
14. Test applicable access ports (headphone jack, personal device ports, etc.).
15. "Cast and print votes for each candidate and ballot issue."
Be sure to test for blank ballots, overvotes, undervotes, and write-in votes).
16. Verify that the printer is accurately marking selections and operating correctly.

17. "Using additional ballots, repeat steps # - # until each selection has been selected and printed.
Insert additional ballots in different orientations (face up and face down forwards and backwards)."
18. "Use pre and hand-marked ballots to verify the terminal's ability to accurately identify pre-marked ballots. *Be sure to test for blank ballots, over, under, and write-in votes."*
19. Turn the mode switch key to the "OFF" position.
20. "Complete and have witnesses sign the Certification of AutoMARK Testing form.
Store printed test ballots with the Certification of AutoMARK Testing form."

Storage and Security

21. Store equipment in a secure location with access recorded and limited to authorized personnel only.

Public Certification Test - Optical Scan Ballot Scanner

Physical Analysis:

1. Randomly select 10%, a minimum of one, Optical Scan Tabulator that will be used, include backup units. *A county with 8 units must test at least one unit. A county with 21 units must test at least 3 units, etc.*
2. Examine the unit for cracks, dents, and structural deficiencies.
(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)
3. Verify security seal numbers match the numbers recorded on the chain-of-custody and visually inspect the machine for signs of unauthorized access.
4. Verify that there is paper in the printer. Ensure there is a sufficient amount of paper available.

Diagnostic Analysis:

5. Install the election definition media and turn the mode switch key to "OPEN/CLOSE Poll."
6. Use the "Initial State Report" to verify the date, time, and firmware version.
Date: ____ / ____ / ____ Time: ____ : ____ Firmware: _____
7. Unplug the ballot scanner and verify that it will operate on battery power alone.
8. Verify that the battery charger will charge the battery.

Functional Analysis:

9. Use the menu options to open the polls and if prompted, clear election day totals.
10. When prompted, turn the mode switch key to "VOTE."
11. Verify the Zero Total Report printed correctly.
12. Use a county-made test set of ballots to accumulate a significant number of ballots (at least 25) on the scanner.
13. Turn the mode switch key to "OPEN/CLOSE POLL" and select "Close Polls" menu option.
14. Verify the vote counts printed on the Status Report are correct.
15. Zero totals by re-opening the polls, selecting clear totals and close polls menu options.
16. Turn the mode switch key to the "OFF" position.
17. Complete and have witnesses sign the Certification of Vote Tabulation System Testing form.
Store printed test ballots with the Certification of Vote Tabulation System Testing form.

Storage and Security:

18. Ensure security seals are intact and match the seal numbers on seal log.
Security Guidelines permit election definition media to be sealed in the terminal during transportation.
19. Store in a secure location with access recorded and limited to authorized personnel only.

Public Certification Test – Election Management Software

Functional Analysis:

1. Verify that the computer your EMS is installed on is not connected to any network.
2. If not already loaded, load the EMS election definition database on the EMS computer.
3. Verify the date, time, and software version are correct.
Date: ____ / ____ / ____ Time: ____ : ____ Software & Version: _____ "
4. *(Complete steps 4-6 if your county uses EMS to create election definition media, otherwise skip to #7)*
Verify that the optical scan ballot tabulators will support election definition media prepared at the county.
5. Load election definition into the optical scan ballot scanner and use the county-marked test set of ballots to cast votes on the optical scan ballot scanner.
6. Close the election on the optical scan ballot scanner and print the vote totals.
7. Use the county method for transporting and load vote totals from the optical scan ballot scanner on to the EMS computer.
8. Printed EMS reports and verify that they match the optical scan ballot scanner printed vote totals.
9. Zero the election totals and close the election on the EMS computer.
10. Complete and have witnesses sign the Certification of Vote Tabulation System Testing form.
Store printed test ballots with the Certification of Vote Tabulation System Testing form.

Storage and Security:

11. On the EMS computer apply security seals to all unused connections including universal serial bus (USB), parallel, and other ports. Record security seal numbers on the security seal log.
12. Store in a secure location with access recorded and limited to authorized personnel only.
13. Verify that the computer your EMS is installed on is not connected to any network.

Election Day Testing

Election Day Testing must be performed on Election Day. Election Day Testing must take place on at least 5%, with a minimum of one, Voter Assist Terminals that will be used, including backup equipment.

Record the outcome of the units tested on election day and securely store these results separate from the ballots. Copies of the Certification Testing form are in the back of this handout.

Election Day Test - Voter Assist Terminal

Voter Assist Terminal Information: Model: _____ Serial Number: _____

Physical Analysis:

1. Randomly select 5%, a minimum of one, Voter Assist Terminals that will be used, include backup units. *A county with 8 units must test at least one unit. A county with 21 units must test at least 2 units, etc.*
2. Examine the unit for cracks, dents, and structural deficiencies.
(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)
3. Verify security seal numbers match the numbers recorded on the seal log and visually inspect the machine for signs of unauthorized access.
4. Ensure that there is an ink cartridge in the printer and that the print head is clean.
Clean dirty print heads by dabbing the print head on a cloth dampened with Windex.

Diagnostic Analysis:

5. Verify that the election definition media is installed, if not, install, seal, and record seal number on seal log.
6. Turn the voter assist terminal on, and as it boots up verify that the correct firmware version is installed.
While the unit is booting up, the firmware version is displayed at the top of the screen (AutoMARK #.#). Firmware Version: _____
7. When screen displays "Insert Your Ballot," turn the mode switch key to the "TEST" position.
8. Print a test ballot and verify that the printer is operating correctly and clearly.
9. Verify the date and time is correct. Date: ____/____/____ Time: ____:____
The date and time are located at the bottom of the test ballot and the top right corner of the ""TEST"" screen.
10. Verify the screen condition, clarity, and calibration (calibrate if necessary).

Functional Analysis:

11. Turn the mode switch key to the "ON" position.
12. Remove ballot stub and insert a ballot into the terminal.
13. Test all ballot marking options while making ballot selections (touch screen, keypad, etc.).
14. Test applicable access ports (headphone jack, personal device ports, etc.).
15. Print a minimum of two ballots by randomly making contest band ballot issue selections.
Be sure to test for blank ballots, overvotes, undervotes, and write-in votes).
16. Verify that the printer is accurately marking selections and operating correctly.
17. Use pre or hand-marked ballot to verify the terminal's ability to accurately identify a pre-marked ballot.
Be sure to test for blank ballots, over, under, and write-in votes.
18. Turn the mode switch key to the "OFF" position.

19. Complete and have witnesses sign the Certification of AutoMARK Testing form.
Store printed test ballots with the Certification of AutoMARK Testing form.

Security and Storage:

20. Store equipment in a secure location with access recorded and limited to authorized personnel only.

Election Day Test - Optical Scan Ballot Scanner

Optical Scan Ballot Scanner Information: Model: _____ Serial Number: _____

Physical Analysis:

1. Randomly select 5%, a minimum of one, Voter Assist Terminals that will be used, include backup units. *A county with 8 units must test at least one unit. A county with 21 units must test at least 2 units, etc.*
2. Examine the unit for cracks, dents, and structural deficiencies.
(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)
3. Verify security seal numbers match the numbers recorded on the chain-of-custody and visually inspect the machine for signs of unauthorized access.
4. Verify that there is paper in the printer. Ensure there is a sufficient amount of paper available.

Diagnostic Analysis:

5. Install the election definition media and turn the mode switch key to "OPEN/CLOSE POLL.
6. Use the ""Initial State Report"" to verify the date, time, and firmware version.
Date: ____ / ____ / ____ Time: ____ : ____ Firmware: _____
7. Unplug the ballot scanner and verify that it will operate on battery power alone.
8. Verify that the battery charger will charge the battery.

Functional Analysis:

9. Use the menu options to open the polls and if prompted, clear election day totals.
10. When prompted, turn the mode switch key to "VOTE."
11. Verify the Zero Total Report printed correctly.
12. Use a county-made test set of ballots to accumulate a significant number of ballots (at least 25) on the scanner.
13. Turn the mode switch key to "OPEN/CLOSE POLL" and select "Close Polls" menu option.
14. Verify the vote counts printed on the Status Report are correct.
15. Zero totals by re-opening the polls, selecting clear totals and close polls menu options.
16. Turn the mode switch key to the "OFF" position.
17. Complete and have witnesses sign the Certification of Vote Tabulation System Testing form.
Store printed test ballots with the Certification of Vote Tabulation System Testing form.

Security and Storage:

18. Ensure security seals are intact and match the seal numbers on seal log.
Security Guidelines permit election definition media to be sealed in the terminal during transportation.
19. Store in a secure location with access recorded and limited to authorized personnel only.

Election Day Test – Election Management Software

Election Management System Software: _____
Unity 3.0.1.1 software includes: ERM, DAM, EDM, ESSIM, HPM, and Audit Manager.

Functional Analysis:

1. Verify that the computer your EMS is installed on is not connected to any network.
2. If not already loaded, load the EMS election definition database on the EMS computer.
3. Verify the date, time, and software version are correct.
Date: ____ / ____ / ____ Time: ____ : ____ Software & Version: _____
4. *(Complete steps 4-6 if your county uses EMS to create election definition media, otherwise skip to #7)*
Verify that the optical scan ballot tabulators will support election definition media prepared at the county.
5. Load election definition into the optical scan ballot scanner and use the county-marked test set of ballots to cast votes on the optical scan ballot scanner.
6. Close the election on the optical scan ballot scanner and print the vote totals.
7. Use the county method for transporting and load vote totals from the optical scan ballot scanner on to the EMS computer.
8. Printed EMS reports and verify that they match the optical scan ballot scanner printed vote totals.
9. Zero the election totals and close the election on the EMS computer.
10. Complete and have witnesses sign the Certification of Testing form.
Store printed test ballots with the Certification of Testing form.

Security and Storage:

11. On the EMS computer apply security seals to all unused connections including universal serial bus (USB), parallel, and other ports. Record security seal numbers on the security seal log.
12. Store in a secure location with access recorded and limited to authorized personnel only.
13. Verify that the computer your EMS is installed on is not connected to any network.

Storage Procedures

1. Verify that all voting equipment is returned to the county election office or designated storage location.
2. Verify security seal numbers match the numbers recorded on the chain-of-custody and visually inspect the machine for signs of unauthorized access.
3. Examine the unit for cracks, dents, and structural deficiencies.
(Case, cover, latches, hinges, wheels, stand, power cord and plug, etc.)
4. Schedule maintenance for any equipment in need of repair and order replacement parts for any missing or damaged parts.
5. Remove any remaining voting equipment voting definition media.
 - a. Securely store the media until all tabulation and post election audits have are completed.
 - b. Return the media to the manufacturer or securely store the election definition media until it is returned to the manufacturer for programming.
6. Replace any security seals that were removed and record the seal number(s) on the Security Seal Log.
7. Collect, label, and seal all of the related election materials (i.e. logs, sets of test ballots, etc.). Record these security seal numbers on a log describing the materials.
8. Store the ballots and election related materials in a secure location not generally accessible. A log should be maintained of all persons having access to that storage location. The log should show the names dates times and purposes for all persons having access to that storage location.
9. Store the storage location access log, ballot and election material logs in a secure area not generally accessible.
10. The secure ballot, election materials, and voting equipment storage location shall have the following characteristics:
 - a. The location shall remain locked at all times
 - b. Access to such location shall be exclusively controlled by the county election office
 - c. Access shall only be granted to such location for the purpose of machine programming, maintenance, testing or set-up

Maintenance Procedures

- Allow only authorized personnel to physically access the voting system. For tracking purposes, record the dates, times, and purposes for all staff members entering the secure storage area.
- Require staff members to wear identification at all times. When visitors, vendors, maintenance personnel, and other nonstaff individuals enter the election work and secure storage areas, log their entry and exit dates and times, and the purpose of their visit.
- Control and monitor access to the voting system computer(s) at all times. Consider securing this computer in a controlled access room and keep a log of everyone who accesses the system along with the date and reason. Always require two-person integrity when accessing the voting system computer.
- Control the access of vendor personnel to your system until you are absolutely certain that any change, upgrade, or maintenance that they intend to perform has already been approved by the State certification process. *It is essential that the vendor never be allowed access to the voting system without a member of the election office staff present.* In this context, a nonvendor consultant working under contract with the election office is considered to be a member of the election office staff; however, consultants should be monitored as closely as vendor personnel.
 - County election administrators, especially new election officials should contact their voting system manufacturer to ensure their voting equipment maintenance agreements are current and sufficient for the voting equipment in general.
- Be aware that many voting system components, such as voting equipment, memory cards, and encoders, contain batteries. Develop an understanding of the expected life of the batteries and have a plan in place to manage battery replacement on Election Day.
 - Set up a schedule to replace voting equipment batteries according to manufacturer recommended schedules. Contact the voting system vendor for assistance developing this schedule.